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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/756,823	01/14/2004	Aleksei Mikhailov	A-8862	2394

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EXAMINER

PYO, KEVIN K

ART UNIT	PAPER NUMBER
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2878

DATE MAILED: 05/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/756,823

Applicant(s)

MIKHAILOV ET AL.

Examiner

Kevin Pyo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 10, 13-15 and 17-19 is/are rejected.
- 7) ☒ Claim(s) 8, 9, 11, 12 and 16 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>1/14/04</u> . | 6) <input type="checkbox"/> Other: ____. |

Claim Objections

1. Claims 1, 3, 9 and 13 are objected to because of the following informalities:

In claim 1, it is unclear whether or not “the lens elements” of line 11 refers to “lens elements” of line 6. Clarification is requested.

The term “preferably” in claims 3 and 13; and the phrase “in particular” in claim 9 should be removed in view of avoiding any confusion.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Oishi (5,150,259).

Regarding claim 1, Oishi shows in Figs.1 and 57A the following elements of applicant's invention: a) detection means (the image sensor 12 in Fig.1; col.5, lines 19-25), which can detect the light emerging from an object (2, 11); b) at least one imaging unit comprising first lens means (16a in the lower portion of 5 in Fig.57A) having a plurality of lens elements arranged in the formed of an array, through which light emerging from the object (2) can pass and second lens means (16a in the upper portion of 5 in Fig.57A), which are arranged between the first lens means and the detection means and can feed the light that has passed through the lens elements

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to the detection means (In a situation where an optical imaging device is an imaging digitizing apparatus, as shown in Fig.1, an image sensor 12 is used to detect an image of an object 11. In view of Figs.1 and 57A, an image sensor will be positioned at the location 3 to detect an image of an object 2), wherein the second lens means have a plurality of lens element arranged in the form of an array (16a in the upper portion of 5 in Fig.57A), and wherein the lens element of the first and/or of the second lens means have, at least in sections, a cylinder geometry or a cylinder-like geometry (Fig.57A).

Regarding claim 2, the limitation therein is shown in Figs.57A and 57B.

Regarding claim 18, Oishi discloses in col.1, lines 6-9 that its optical imaging device is applicable to a facsimile.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3-7, 10, 13-15, 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oishi (5,150,259).

Regarding claims 3, the specific arrangement of cylindrical lens elements (16a in Fig.57A) would have been obvious to one of ordinary skill in the art in view of design requirements and the desired performance.

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Regarding claims 4 and 13, Oishi discloses an optical imaging device wherein an image of an object is produced by scanning (col.1, lines 12-15). Although Oishi et al does not specifically mention the use of scanning means, the device Oishi et al would inherently include scanning means.

Regarding claim 5, the limitation therein is shown in Fig.65.

Regarding claims 6 and 14, Oishi discloses that the use of multiple imaging units is known in the art (col.1, lines 39-41) and it would have been obvious to one of ordinary skill in the art to utilize more than one imaging unit in view of the desire to provide an extended image of an object. Regarding claim 17, the image signals generated by an image sensor would inherently be combined in view of providing a combined image of an object.

Regarding claims 7 and 15, the specific resolutions for first and second imaging units would have been obvious to one of ordinary skill in the art in view of the specific type of lens elements utilized to form first and second imaging units and design requirements.

Regarding claim 10, the limitation therein is shown in Figs.57A.

Regarding claim 19, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations.

Allowable Subject Matter

6. Claims 8, 9, 11, 12 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Regarding claims 8 and 9, the prior art fails to disclose or make obvious a detection apparatus for the optical detection of an object comprising, in addition to the other recited features of the claim, the limitation of “the late least one first imaging unit has a higher resolution in a first direction what in a second direction perpendicular thereto, whereas the at least one second imaging unit has a higher resolution in the second direction than in the first direction perpendicular thereto”.

Regarding claim 11, the prior art fails to disclose or make obvious a detection apparatus for the optical detection of an object comprising, in addition to the other recited features of the claim, the limitation of “the lens elements comprising at least two parts can slit the light that emerges from a point of the object and impinges on them into two partial beams in such a way that points of impingement of said partial beams on the detection means can provide information about the position of the point in a direction perpendicular to the surface of the object”.

Regarding claim 12, the prior art fails to disclose or make obvious a detection apparatus for the optical detection of an object comprising, in addition to the other recited features of the claim, the limitation of “the scanning means are configured in such a way that, in a first scanning position, the light emerging from a point of the object impinges on a first point of impingement on the detection means, and that, in a second scanning position, the light emerging from the same point of the object impinges on a second point of impingement-at a distance from the first point of impingement- on the detection means, the points of impingement being able to provide information about the position of the point in direction perpendicular to the surface of the object”.

Regarding claim 16, the prior art fails to disclose or make obvious a method for operating a detection apparatus comprising, in addition to the other recited features of the claim, the limitation of “the imagings by the first imaging unit and by the second imaging unit are carried out with different resolution in mutually perpendicular directions, the first imaging unit achieving a higher-resolution imaging in a first direction and the second imaging unit achieving a higher-resolution imaging in the second direction perpendicular thereto”.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lissotschnko et al (JP 2001083417 A) is cited for disclosing an image forming device comprising cylindrical lens elements.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Pyo whose telephone number is (571) 272-2445. The examiner can normally be reached on Mon-Fri (with flexible hour), First Mon. off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kevin Pyo
Primary Examiner
Art Unit 2878

Pkk
5/12/2005